- comprising a CDRL1 as set forth in SEQ ID NO: 13, a CDRL2 as set forth in SEQ ID NO: 14, and a CDRL3 as set forth in SEQ ID NO: 15; and
- a second IDUA signature peptide of MPSI of SEQ ID NO: 2 with an antibody or antigen-binding fragment thereof that binds the second IDUA signature peptide and comprises: a VH domain comprising a CDRH1 as set forth in SEQ ID NO: 22, a CDRH2 of SEQ ID NO: 23, and a CDRH3 as set forth in SEQ ID NO: 24, and a VL domain comprising a CDRL1 as set forth in SEQ ID NO: 25, a CDRL2 as set forth in SEQ ID NO: 26, and a CDRL3 as set forth in SEQ ID NO: 27; or
- (C) a first IDUA signature peptide of MPS I of SEQ ID NO: 1 with an antibody or antigen-binding fragment thereof that binds the first IDUA signature peptide and comprises: a VH domain comprising a CDRH1 as set forth in SEQ ID NO: 10, a CDRH2 as set forth in SEQ ID NO: 11, and a CDRH3 as set forth in SEQ ID NO: 12, and a VL domain comprising a CDRL1 as set forth in SEQ ID NO: 13, a CDRL2 as set forth in SEQ ID NO: 14, and a CDRL3 as set forth in SEQ ID NO: 15;
- a second IDUA signature peptide of MPS I of SEQ ID NO: 2 with an antibody or antigen-binding fragment thereof that binds the second IDUA signature peptide and comprises: a VH domain comprising a CDRH1 as set forth in SEQ ID NO: 22, a CDRH2 of SEQ ID NO: 23, and a CDRH3 as set forth in SEQ ID NO: 24, and a VL domain comprising a CDRL1 as set forth in SEQ ID NO: 25, a CDRL2 as set forth in SEQ ID NO: 26, and a CDRL3 as set forth in SEQ ID NO: 27; and
- a GAA signature peptide of Pompe Disease of SEQ ID NO: 5 with an antibody or antigen binding fragment thereof that binds the GAA signature peptide and comprises: a VH domain comprising a CDRH1 as set forth in SEQ ID NO: 66, a CDRH2 as set forth in SEQ ID NO: 67, and a CDRH3 as set forth in SEQ ID NO: 68, and a VL domain comprising a CDRL1 as set forth in SEQ ID NO: 69, a CDRL2 as set forth in SEQ ID NO: 70, and a CDRL3 as set forth in SEQ ID NO: 71; or
- (D) a first IDUA signature peptide of MPS I of SEQ ID NO: 1 with an antibody or antigen-binding fragment thereof that binds the first IDUA signature peptide and comprises: a VH domain comprising a CDRH1 as set forth in SEQ ID NO: 10, a CDRH2 as set forth in SEQ ID NO: 11, and a CDRH3 as set forth in SEQ ID NO: 12, and a VL domain comprising a CDRL1 as set forth in SEQ ID NO: 13, a CDRL2 as set forth in SEQ ID NO: 14, and a CDRL3 as set forth in SEQ ID NO: 15;
- a second IDUA signature peptide of MPS I of SEQ ID NO: 2 with an antibody or antigen-binding fragment thereof that binds the second IDUA signature peptide and comprises: a VH domain comprising a CDRH1 as set forth in SEQ ID NO: 22, a CDRH2 of SEQ ID NO: 23, and a CDRH3 as set forth in SEQ ID NO: 24, and a VL domain comprising a CDRL1 as set forth in SEQ ID NO: 25, a CDRL2 as set forth in SEQ ID NO: 26, and a CDRL3 as set forth in SEQ ID NO: 27; and

- a GAA signature peptide of Pompe Disease of SEQ ID NO: 3 with an antibody or antigen binding fragment thereof that binds the GAA signature peptide and comprises: a VH domain comprising a CDRH1 as set forth in SEQ ID NO: 44, a CDRH2 as set forth in SEQ ID NO: 45, and a CDRH3 as set forth in SEQ ID NO: 46, and a VL domain comprising a CDRL1 as set forth in SEQ ID NO: 47, a CDRL2 as set forth in SEQ ID NO: 48, and a CDRL3 as set forth in SEQ ID NO: 49; or
- (E) a first GAA signature peptide of Pompe Disease of SEQ ID NO: 3 with an antibody or antigen binding fragment thereof that binds the first GAA signature peptide and comprises: a VH domain comprising a CDRH1 as set forth in SEQ ID NO: 44, a CDRH2 as set forth in SEQ ID NO: 45, and a CDRH3 as set forth in SEQ ID NO: 46, and a VL domain comprising a CDRL1 as set forth in SEQ ID NO: 47, a CDRL2 as set forth in SEQ ID NO: 48, and a CDRL3 as set forth in SEQ ID NO: 49; and
- a second GAA signature peptide of Pompe Disease of SEQ ID NO: 5 with an antibody or antigen binding fragment thereof that binds the GAA signature peptide and comprises: a VH domain comprising a CDRH1 as set forth in SEQ ID NO: 66, a CDRH2 as set forth in SEQ ID NO: 67, and a CDRH3 as set forth in SEQ ID NO: 68, and a VL domain comprising a CDRL1 as set forth in SEQ ID NO: 69, a CDRL2 as set forth in SEQ ID NO: 70, and a CDRL3 as set forth in SEQ ID NO: 71; or
- (F) a first IDUA signature peptide of MPS I of SEQ ID NO: 1 with an antibody or antigen-binding fragment thereof that binds the first IDUA signature peptide and comprises: a VH domain comprising a CDRH1 as set forth in SEQ ID NO: 10, a CDRH2 as set forth in SEQ ID NO: 11, and a CDRH3 as set forth in SEQ ID NO: 12, and a VL domain comprising a CDRL1 as set forth in SEQ ID NO: 13, a CDRL2 as set forth in SEQ ID NO: 14, and a CDRL3 as set forth in SEQ ID NO: 15;
- a second IDUA signature peptide of MPS I of SEQ ID NO: 2 with an antibody or antigen-binding fragment thereof that binds the second IDUA signature peptide and comprises: a VH domain comprising a CDRH1 as set forth in SEQ ID NO: 22, a CDRH2 of SEQ ID NO: 23, and a CDRH3 as set forth in SEQ ID NO: 24, and a VL domain comprising a CDRL1 as set forth in SEQ ID NO: 25, a CDRL2 as set forth in SEQ ID NO: 26, and a CDRL3 as set forth in SEQ ID NO: 27;
- a first GAA signature peptide of Pompe Disease of SEQ ID NO: 3 with an antibody or antigen binding fragment thereof that binds the first GAA signature peptide and comprises: a VH domain comprising a CDRH1 as set forth in SEQ ID NO: 44, a CDRH2 as set forth in SEQ ID NO: 45, and a CDRH3 as set forth in SEQ ID NO: 46, and a VL domain comprising a CDRL1 as set forth in SEQ ID NO: 47, a CDRL2 as set forth in SEQ ID NO: 48, and a CDRL3 as set forth in SEQ ID NO: 49; and
- a second GAA signature peptide of Pompe Disease of SEQ ID NO: 5 with an antibody or antigen binding fragment thereof that binds the GAA signature peptide and comprises: a VH domain comprising a